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January 24, 2002

BY ELECTRONIC FILING

Ms. Magalie R. Salas
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Oral Ex Parte Presentation
ET Docket No. 98-153

Dear Ms. Salas:

This is to report that on January 23, 2002, representatives of QUALCOMM, Cingular Wireless, Sprint PCS, and Verizon Wireless (collectively referred to as the "Wireless Companies") met with the staff of the Office of Engineering & Technology ("OET") and the Wireless Telecommunications Bureau ("WTB") to discuss the above-referenced proceeding, and specifically QUALCOMM's recent study demonstrating that QUALCOMM's E911 technology (so-called gpsOne) cannot meet the FCC's E911 mandate in the face of harmful interference from ultra wideband ("UWB") devices.

The following members of the OET staff attended the meeting: Bruce Franca, Julius Knapp, Michael Marcus, Bruce Romano, Karen Rackley, Ron Chase, and John Reed. The following members of the WTB staff attended the meeting: James Schlicting, Kathleen Ham, Tom Stanley, Bill Lane, Charles Rush, Joel Taubenblatt, and Blaise Scinto. Also attending the meeting were Dr. Samir Soliman, Kevin Kelley, Jonas Neihardt, and myself on behalf of QUALCOMM; Jim Bugel on behalf of Cingular Wireless; Luisa Lancetti on behalf of Sprint PCS; and, Donald Brittingham of Verizon Wireless. Bob Calaff of VoiceStream Wireless observed the meeting.

During the meeting, Dr. Soliman, the author of QUALCOMM's study, summarized its results. He explained that because the major UWB proponents had declined to loan or sell QUALCOMM a UWB device for testing purposes, QUALCOMM's recent testing, like QUALCOMM's testing of last year, was conducted with off-the-shelf equipment which was put together to produce a waveform that has similar characteristics as those of UWB devices as

described in UWB literature. He also explained that QUALCOMM used a commercial wireless phone containing the gpsOne technology in these tests. Finally, he stressed that the tests were conducted in a very benign indoor environment and with a relatively strong GPS signal to isolate the impact of UWB emissions, to eliminate other variables, and to generate reproducible results.

Dr. Soliman stated that QUALCOMM found that if a single UWB device is within 15 meters of a wireless phone containing QUALCOMM's gpsOne technology and the UWB device is operating at Part 15 Class B levels, the wireless phone cannot meet the FCC's E911 requirements. He also explained that the wireless phone begins to suffer substantial degradation if the wireless phone is within 75 meters of a UWB device. Dr. Soliman said that even if the UWB device were operating at 12 dB less than Part 15 Class B levels, the gpsOne receiver still would suffer harmful interference such that it could not meet the FCC's mandate. Dr. Soliman noted that QUALCOMM has performed numerous other tests to characterize the performance of gpsOne technology indoors and in other challenging environments in which Part 15 devices, such as personal computers, were present, but QUALCOMM never experienced results approaching those reached in his recent tests of the performance of gpsOne in the face of UWB emissions.

Dr. Soliman stated that to mitigate the harmful interference to wireless phones from a single UWB device, he believed that UWB emissions should be limited across all bands to 35 dB below current Part 15 levels, which would protect gpsOne and wireless receivers to within six feet from such harmful interference. He also stated that he did not believe that such an emissions mask would provide adequate protection from the aggregate harmful interference caused by multiple UWB devices. Thus, he stated that there would have to be an additional margin to protect against such aggregate effect. Dr. Soliman also stressed that in designing an emissions mask, the FCC should use a more representative number of signal-to-noise plus interference level, C/(N+I), and he asked the OET staff to pay particular attention to the C/(N+I) levels in analyzing QUALCOMM's study. Any out-of-band emission mask should be based on reasonable degradation in the RF performance and not merely on the thresholds at which the E911 devices completely cease to meet the FCC's E911 requirements. Finally, QUALCOMM pointed out that no emissions mask has been tested and asked that such testing occur with actual UWB devices provided by the manufacturers before any mask is adopted.

The Wireless Companies also emphasized during the meeting that UWB devices do not operate like existing Part 15 devices, which do not intentionally radiate dense power into the PCS and cellular bands. The Wireless Companies explained that the peaks of power intentionally generated into those bands by UWB devices are unique, and the dense power from mobile, ubiquitous UWB devices would make it very difficult and costly to mitigate the harmful interference to wireless phones. Thus, the Wireless Companies expressed their concern not only with harmful interference from UWB emissions to the gpsOne E911 technology, but also with such harmful interference to wireless calls in general, a matter which has been the topic of test results. The Wireless Companies stated that there has to be some interference protocol to deal with the harmful interference from UWB devices. To the burden of mitigating this harmful interference upon wireless carriers would be inconsistent with Part 15 and would be fundamentally unfair. Moreover, QUALCOMM noted that it spent over $1 billion to develop its gpsOne technology, which is a safety of life service. To allow this safety of life service to be

substantially undermined by UWB emissions would harm the public's safety and would be grossly inequitable in light of QUALCOMM's investment.

As a result, the Wireless Companies continue to ask, consistent with the positions of the Defense Department, the Department of Transportation, and the National Aeronautics and Space Administration, that UWB devices not be authorized to operate below 6 GHz.

Sincerely yours,

Dean R. Brenner
Attorney for QUALCOMM Incorporated

cc: Bruce Franca
Julius Knapp
Michael Marcus
Bruce Romano
Karen Rackley
Ron Chase
John Reed
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